

CLAIMS

1. A process for manufacturing a PTFE filament of the type comprising steps of extrusion, and, subsequently, stretching, heating and cutting PTFE, characterized by the following steps prior to extrusion:

- 5 providing a recipient having rigid side walls;
 arranging a first mixture containing PTFE and a filler, and a second mixture containing PTFE, inside the recipient, side by side and aligned with the side walls; and
 pressing the first and second mixtures in a direction parallel to
10 the side walls to form a billet in which the first and second mixtures have different coefficients of friction.

2. The process according to claim 1 is characterized by the fact that, in the arranging step, the first and the second mixtures are inserted respectively into two portions of the recipient separated by a barrier, and, subsequently, the barrier is removed, enabling a part of the first mixture to contact a part of the second, and be arranged side by side and aligned with the side walls of the recipient.

3. The process according to claim 1 or 2 is characterized by the fact that, in the step of arranging, the first mixture includes a pigment and the second mixture includes another pigment.

4. A PTFE filament obtained by the process defined in claim 1 is characterized by comprising one side with a filler, so that this side has a different coefficient of friction in relation to the other side.

5. The PTFE filament in claim 4 is characterized by the fact that
25 the first and the second mixtures have the same shrink properties.

6. The PTFE filament in claim 4 or 5 is characterized by further comprising a lubricant.

7. The PTFE filament in any one of claims 4 to 6 is characterized by the fact that each side has a different color.

8. The PTFE filament in any one of claims 4 to 7 is characterized
30 by the fact that the filler comprises at least one of silica, alumina, mica and calcium carbonate.

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9. The PTFE filament according to any one of claims 4 to 8 is characterized by the fact that the quantity of filler in the respective side ranges from 1 to 25%.

5 10. The PTFE filament according to any one of claims 4 to 9 is characterized by the fact that the quantity of pigment in at least one side ranges from 0.05% to 10%.

11. The PTFE filament according to any one of claims 4 to 10 is characterized by the fact that said coefficient of friction in the side with filler ranges from 0.08 to 0.20 and the other side is less than 0.08.

10 12. The PTFE filament according to any one of claims 4 to 11, characterized by comprising a width ranging from 0.5 to 3.0 mm, a thickness ranging from 20 to 400 μm , a density ranging from 0.7 to 2.2 g/cm^3 , a tensile strength ranging from 100 to 1100 MPa and a tenacity ranging from 2.0 to 6.0 cN/dtex.

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